To: Hospital Chief Financial Officers

CC: Case Mix Liaisons, Hospital Quality Contacts

From: HSCRC Quality Team

Date: February 28, 2023

Re: Readmission Reduction Incentive Program (RRIP) Policy for Rate Year (RY) 2025

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In January 2023, the Commission extended Rate Year (RY) 2023 Readmission Reduction Incentive Program (RRIP) to RY 2025. This memo summarizes the key elements of the RY 2025 program.

Approved Recommendations

The RRIP policy was redesigned in RY 2022 to modernize the program for the Total Cost of Care Model. The RY 2025 final recommendations maintain the measure updates and methodology determinations that were developed and approved for RY 2022.[1]

These are the final recommendations for the RY 2023 RRIP policy, which has been extended to RY 2025:

1. Maintain the 30-day, all-cause readmission measure.
2. Improvement Target- Maintain the RY 2022 approved statewide 5-year improvement target of -7.5 percent from 2018 base period.

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[1] See the RY 2022 policy for detailed discussion of the RRIP redesign, rationale for decisions, and approved recommendations.

3. Attainment Target- Maintain the attainment target whereby hospitals at or better than the 65th percentile of statewide performance receive scaled rewards for maintaining low readmission rates.
4. Maintain maximum rewards and penalties at 2 percent of inpatient revenue.
5. Provide an additional payment incentive (up to 0.50 percent of inpatient revenue) for reductions in within-hospital readmission disparities. Scaled rewards begin at 0.25 percent of IP revenue for hospitals on track for a 50 percent reduction in the disparity gap measure over 8 years, capped at 0.50 percent of IP revenue for hospitals on track for 75 percent or larger reduction in the disparity gap measure over 8 years.
6. Continue development of an all-payer Excess Days in Acute Care measure to account for inpatient, emergency department, and observation revisits post-discharge.
7. Adjust the RRIP pay-for-performance program methodology as needed due to COVID-19 PHE

The final, approved RRIP policy can be found on the HSCRC quality website:
[RY 2025 RRIP Final Policy](#)

Readmission Measurement

For the RRIP methodology, performance is measured using the 30-day, all-payer, all-cause readmission readmission rate (both within and between hospitals) with case-mix adjustments for patient severity (based upon discharge APR-DRG and severity of illness (SOI)) and with exclusions granted for planned readmissions.[2] Readmissions to

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[2] The most recent CMS Planned Readmission logic is under Version 4.0 2022

specialty hospitals are also included.[3] See Appendix A for additional details on the HSCRC readmission measure specifications.

Measuring the Better of Attainment or Improvement'

Using the readmission measure that was approved by the Commission, the improvement and attainment targets for CY 2023 performance are as follows:

A. Set the all-payer case-mix adjusted readmission rate improvement target at 7.50% for CY 2018 to CY 2023, to align with the five-year statewide improvement goal of 7.50 percent.

B. Set the attainment performance standards for CY 2023 to align with rewards beginning at the 65th percentile as follows:

   a. Use CY 2018 hospital performance results, using CY 2021 norms, with the above improvement factor added.

   b. Calculate reward threshold to begin at the 65th percentile.

   c. Maintain the threshold for the full attainment reward at the 5th percentile.

Based on the better of attainment or improvement, the Commission approved scaled penalties of up to 2% and scaled rewards of up to 2% of inpatient revenue. These penalties and rewards are not revenue neutral.[4]

Within-Hospital Disparity Measurement Using Patient Adversity Index (PAI)

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[3] The specialty hospitals currently are: 210089- Adventist Rehabilitation at White Oak; 213028- Chesapeake Rehab; 213029- Adventist Rehabilitation of Maryland; 213300- Mt Washington Pediatric Hospital; 214000- Sheppard Pratt; 214004- Springfield Hospital Center; 214012- Thomas B. Finan Center; 214013- Adventist Behavioral Health- Rockville

[4] Across all quality programs, there is a hospital maximum penalty guardrail of 3.48% of total revenue for RY 2025. The maximum guardrail policy will be calculated in accordance with the following formula, per the "Final Maximum Revenue Guardrail for Maryland Hospital Quality Programs" during the November 2019 Commission Meeting - Percent of Medicare revenue at-risk for quality multiplied by the percent of Maryland revenue attributable to inpatient services.

The RY 2025 policy continues a component developed for RY 2022 that incentivizes hospitals to reduce socioeconomic disparities in readmission rates. The incentives are calculated in three steps: 1) Measure patient socioeconomic exposure; 2) For each hospital, assess the change in readmission rates across socio economic exposure, or "gap" measure; 3) Reward hospitals achieving reductions in the gap measure. While the disparity gap was approved as part of the RY 2022 RRIP policy, the improvement reward on the disparity incentive was suspended due to the COVID-19 public health emergency.

We assess patient socioeconomic exposure with the Patient Adversity Index (PAI), a measure developed by the HSCRC. The PAI is calculated for each discharge record. It relies on the patient's Medicaid status, race, and Area Deprivation Index score as reported on the claim. Each of the three items is given a weight that reflects the strength of its association with readmission. The weight for each item is multiplied against the value reported on the claim, and those products are summed together.

Once we have calculated the PAI score for each discharge, we calculate the gap measure for each hospital. The gap measure is a reflection of how readmission risk within a hospital changes for patients with varying levels of PAI. The measure relies on a statistical model (specifically, a random-slope Poisson regression model). The model estimates the change in readmission rate for a one-unit change in PAI at each hospital, after controlling for patient age, APR-DRG, gender, and the mean PAI value for the hospital.

After the gap measure is calculated, we incorporate this information into hospital reimbursement. Hospital rewards are based on progress toward a goal of reducing disparities by at least 50% over eight years. Additional information in the disparity gap metric can be found in the RRIP policy.

Grouper Versions

For RY 2025, the data for CY 2023 (performance period) will be run using version 40 of the APR grouper. The base period for assessing hospital improvement will be maintained as 2018 but under the updated version 40 grouper, and 2018 will be used to calculate the 65_{th} percentile for attainment (with improvement target added). However, CY 2021 will be used to calculate the normative values for determining the hospital expected readmissions, as this period will consider the impact of COVID-19.

RRIP Program Reporting

The HSCRC provides hospitals with monthly summary reports and case-level files for monitoring readmissions throughout the performance period. A separate summary level report on the disparity gap will also be available and the case-level data will contain the variables that make up the PAI measure (i.e., Medicaid status, race, ADI) so that hospitals can track readmissions for these populations.

Summary reports and case-level data for the RRIP program are sent to hospitals via the CRISP Reporting Services (CRS) Portal. Each hospital has a point-of-contact, the Chief Financial Officer or their designee, who is contacted by CRISP to approve requests for access. If you need access to quality reports, please

send an email to CRISP Support (support@crisphealth.org) indicating level of access (summary reports or case-level data). In addition, an interactive Tableau report is available on the portal that allows users to dig further into their hospitals' readmission trends - by service line, by PAI component, and by other summary and detail-level data elements.

For RY 2025, the Portal provides a readmissions summary workbook that contains: a) the normative values; b) full base period CY 2018 readmission results under v40 (may vary over time; see Appendix B for details); c) CY 2018 to CY 2023 year-to-date improvement (by payer); and d) the readmission rate adjusted for out-of-state readmissions (updated quarterly), which is used for attainment. The summary report will also contain a calculation sheet and the improvement and attainment revenue adjustment scales. A separate disparity gap summary report will also be posted, which contains a tab with the calculated disparity gap and improvement overtime, as well as tabs providing the readmission rate by the PAI components (e.g., for Medicaid and non-Medicaid). We expect this workbook will be available on the CRS Portal early April 2023.

If you have any questions, please e-mail hscrc.quality@maryland.gov.

Appendix A: HSCRC RY 2025 Readmissions Measure Specifications

1) Performance Metric

The methodology for the Readmissions Reduction Incentive Program (RRIP) measures performance using the 30-day all-payer all hospital (both intra- and inter-hospital) readmission rate with adjustments for patient severity (based upon discharge all-patient refined diagnosis-related group severity of illness [APR-DRG SOI]) and planned admissions.[5] Unique patient identifiers from CRISP are used to be able to track patients across hospitals for readmissions.

The measure is like the readmission rate that is calculated by CMMI to track Maryland performance versus the nation, with some exceptions. The most notable exceptions are that the HSCRC measure includes psychiatric patients in acute care hospitals, and readmissions that occur at specialty hospitals. In comparing Maryland's Medicare readmission rate to the national readmission rate, the Centers for Medicare & Medicaid Services (CMS) will calculate an unadjusted readmission rate for Medicare beneficiaries. Since the Health Services Cost Review Commission (HSCRC) measure is for hospital-specific payment purposes, an additional adjustment is made to account for differences in case-mix. See below for details on the readmission calculation for the RRIP program.

2) Inclusions and Exclusions in Readmission Measurement
- Planned readmissions are excluded from the numerator based upon the CMS Planned Readmission Algorithm V. 4.0. The HSCRC has also added all vaginal and C-section deliveries and rehabilitation as planned using the APR-DRGs, rather than principal diagnosis.[6] Planned admissions are counted as eligible discharges in the denominator, because they could have an unplanned readmission.
- Discharges for newborn APR-DRG are removed.[7]
- Oncology cases are removed prior to running readmission logic.[8]
- Rehabilitation cases as identified by APR-860 (which are coded under ICD-10 based

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[5] Planned admissions defined under [CMS Planned Admission Logic version 4.0 2022]

[6] **Rehab** DRGs: 540, 541, 542, 560, and 860; **OB Deliveries and Associated DRGs**: 580, 581, 583, 588, 589, 591, 593, 602, 603, 607, 608, 609, 611, 612, 613, 614, 621, 622, 623, 625, 626, 630, 631, 633, 634, 636, 639, 640, and 863.

[7] **Newborn APR-DRGs:** 580, 581, 583, 588, 589, 591, 593, 602, 603, 607, 608, 609, 611, 612, 613, 614, 621, 622, 623, 625, 626, 630, 631, 633, 634, 636, 639, 640, and 863.

[8] **Oncology** DRGs (for which only pediatric cases are removed): 41, 110, 136, 240, 281, 343, 382, 442, 461, 500, 511, 512, 530, 680, 681, 690, 691, 692, 693, 694, 695, and 696.

on type of daily service) are marked as planned admissions and made ineligible for readmission after readmission logic is run.

- Admissions with ungroupable APR-DRGs (955, 956) are not eligible for a readmission, but can be a readmission for a previous admission.
- APR-DRG-SOI categories with less than two discharges statewide are removed.
- Hospitalizations within 30 days of a hospital discharge where a patient dies is counted as a readmission; however, the readmission is removed from the denominator because the case is not eligible for a subsequent readmission.
- Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same or next day as the admission date of the subsequent admission, are removed from the denominator. Thus, only one admission is counted in the denominator, and that is the admission to the transfer hospital (unless otherwise ineligible, i.e., died). It is the second discharge date from the admission to the transfer hospital that is used to calculate the 30-day readmission window.
- Beginning in RY 2019, HSCRC began including information about discharges from chronic beds within acute care hospitals.
- In addition, the following data cleaning edits are applied:
    - Cases with null or missing CRISP unique patient identifiers (EIDs) are removed.
    - Duplicates are removed.
    - Negative interval days are removed.
      HSCRC staff are revising case-mix data edits to prevent submission of duplicates and negative intervals, which are very rare. In addition, CRISP EID matching benchmarks are closely monitored. Currently, hospitals are required to make sure 99.5 percent of inpatient discharges have a CRISP EID.

3) Details on the Calculation of Case-Mix Adjusted Readmission Rate

Data Source:
To calculate readmission rates for RRIP, inpatient abstract/case-mix data with CRISP EIDs (so that patients can be tracked across hospitals) are used for the measurement period, with an additional 30-day runout. To calculate the case-mix adjusted readmission rate for CY 2018 base period and CY 2023 performance period, data from January 1 through December 31, plus 30 days in January of the next year are used. CY 2021 data are used to calculate the normative values, which are used to determine a hospital's expected readmissions, as detailed below, as well as the estimated CY 2018 readmission rates.

Please note that, beginning in RY 2020, the base year readmission rates will not be "locked in",

and may change if there are CRISP EID or other data updates. The HSCRC does not anticipate changing the base period data and does not anticipate that any EID updates will change the base period data significantly; however, the HSCRC has decided the most up-to-date data should be used to measure improvement. As with previous performance periods, the CRISP EIDs are updated throughout the year, and thus, month-to-month results may change based on changes in EIDs.

SOFTWARE: APR-DRG Version 40 (ICD-10) for CY 2018-CY 2023.

Calculation:

Case-Mix Adjusted   (Observed Readmissions)
                              Readmission Rate =   ----------------------------------- * Statewide Base
                              Year Readmission Rate   (Expected Readmissions)

Numerator: Number of observed hospital-specific unplanned readmissions.

Denominator: Number of expected hospital specific unplanned readmissions based upon discharge APR-DRG and Severity of Illness. See below for how to calculate expected readmissions, adjusted for APR-DRG SOI.

Risk Adjustment Calculation:
   Calculate the Statewide Readmission Rate without Planned Readmissions.
   - Statewide Readmission Rate = Total number of readmissions with exclusions removed / Total number of hospital discharges with exclusions removed.
   For each hospital, enumerate the number of observed, unplanned readmissions.
   For each hospital, calculate the number of expected unplanned readmissions at the APR-DRG SOI level (see Expected Values for description). For each hospital, cases are removed if the discharge APR-DRG and SOI cells have less than two total cases in the base period data (CY 2016).
   Calculate at the hospital level the ratio of observed (O) readmissions over expected (E) readmissions. A ratio of > 1 means that there were more observed readmissions than expected, based upon a hospital's case-mix. A ratio of < 1 means that there were fewer observed readmissions than expected based upon a hospital's case-mix.

Multiply the O/E ratio by the base year statewide rate, which is used to get the case-mix adjusted readmission rate by hospital. Multiplying the O/E ratio by the base year state rate converts it into a readmission rate that can be compared to unadjusted rates and case-mix adjusted rates over time.

Expected Values:

The expected value of readmissions is the number of readmissions a hospital would have experienced had its rate of readmissions been identical to that experienced by a reference or normative set of hospitals, given its mix of patients as defined by discharge APR-DRG category and SOI level. Currently, HSCRC is using state average rates as the benchmark.

The technique by which the expected number of readmissions is calculated is called indirect standardization. For illustrative purposes, assume that every discharge can meet the criteria for having a readmission, a condition called being "eligible" for a readmission. All discharges will either have zero readmissions or will have one readmission. The readmission rate is the proportion or percentage of admissions that have a readmission.

The rates of readmissions in the normative database are calculated for each APR-DRG category and its SOI levels by dividing the observed number of readmissions by the total number of eligible discharges. The readmission norm for a single APR-DRG SOI level is calculated as follows:

Let:

N = norm
P = Number of discharges with a readmission
D = Number of eligible discharges
i = An APR DRG category and a single SOI level

$$N_i = \frac{P_i}{D_i}$$

For this example, the expected rate is displayed as readmissions per discharge to facilitate the calculations in the example. Most reports will display the expected rate as a rate per one thousand.

Once a set of norms has been calculated, the norms are applied to each hospital's DRG and SOI distribution. In the example below, the computation presents expected readmission rates for a single diagnosis category and its four severity levels. This computation could be expanded to include multiple diagnosis categories, by simply expanding the summations.

Consider the following example for a single diagnosis category.

Expected Value Computation Example – Individual APR-DRG

A Severity of Illness Level	B Eligible Discharges	C Discharges with Readmission	D Readmissions per Discharge (C/B)	E Normative Readmissions per Discharge	F Expected # of Readmissions (A*E)
1	200	10	.05	.07	14.0
2	150	15	.10	.10	15.0
3	100	10	.10	.15	15.0
4	50	10	.20	.25	12.5
Total	**500**	**45**	**.09**		**56.5**

For the diagnosis category, the number of discharges with a readmission is 45, which is the sum of discharges with readmissions (column C). The overall rate of readmissions per discharge, 0.09, is calculated by dividing the total number of eligible discharges with a readmission (sum of column C) by the total number of discharges at risk for readmission (sum of column B), i.e., 0.09 = 45/500. From the normative population, the proportion of discharges with readmissions for each severity level for that diagnosis category is displayed in column E. The expected number of readmissions for each severity level shown in column F is calculated by multiplying the number of eligible discharges (column B) by the normative readmissions per discharge rate (column E) The total number of readmissions expected for this diagnosis category is the sum of the expected numbers of readmissions for the 4 severity levels.

In this example, the expected number of readmissions for this diagnosis category is 56.5, compared to the actual number of discharges with readmissions of 45. Thus, the hospital had 11.5 fewer actual discharges with readmissions than were expected for this diagnosis category. This difference can also be expressed as a percentage or the O/E ratio.